|  |  |   | $\mathcal{M}$              |
|--|--|---|----------------------------|
| Notice of Allowability   | Application No.  | Applicant(s)  |                            |
|  | 10/614,229   | KIM ET AL.  |                            |
|  | Examiner   | Art Unit  |                            |
|  | David Lam  | 2818  |                            |
| The MAILING DATE of this communication app All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85 NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT R of the Office or upon petition by the applicant. See 37 CFR 1.31   | S (OR REMAINS) CLOSED in to<br>b) or other appropriate commun<br>RIGHTS. This application is sul | his application. If not includication will be mailed in due | led<br>course. <b>THIS</b> |
| 1. This communication is responsive to   |  |   |                            |
| 2. ⊠ The allowed claim(s) is/are <u>1-11</u> .   |  |   |                            |
| 3. $igotimes$ The drawings filed on ${\it 07~July~2003}$ are accepted by the E   | xaminer.   |   |                            |
| <ul> <li>4.  Acknowledgment is made of a claim for foreign priority of a)  All b)  Some* c)  None of the:</li> <li>1.  Certified copies of the priority documents have</li> <li>2.  Certified copies of the priority documents have</li> <li>3.  Copies of the certified copies of the priority documents have International Bureau (PCT Rule 17.2(a)).</li> <li>* Certified copies not received:</li> </ul> | re been received.<br>re been received in Application   | No  | ation from the             |
| Applicant has THREE MONTHS FROM THE "MAILING DATE" noted below. Failure to timely comply will result in ABANDONI THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.  | MENT of this application.  |   |                            |
| <ol> <li>A SUBSTITUTE OATH OR DECLARATION must be subr<br/>INFORMAL PATENT APPLICATION (PTO-152) which give</li> </ol>   |  |   | NOTICE OF                  |
| <ol> <li>CORRECTED DRAWINGS (as "replacement sheets") mu</li> <li>(a) ☐ including changes required by the Notice of Draftsper</li> <li>1) ☐ hereto or 2) ☐ to Paper No./Mail Date</li> <li>(b) ☐ including changes required by the attached Examiner</li> </ol>  | rson's Patent Drawing Review(<br>_·  |   |                            |
| Paper No./Mail Date  |  |   |                            |
| Identifying indicia such as the application number (see 37 CFR each sheet. Replacement sheet(s) should be labeled as such in   |  |   | e back) of                 |
| <ol> <li>DEPOSIT OF and/or INFORMATION about the deposit attached Examiner's comment regarding REQUIREMENT</li> </ol>  | OSIT OF BIOLOGICAL MATER<br>FOR THE DEPOSIT OF BIOL  | RIAL must be submitted.<br>OGICAL MATERIAL.                 | Note the                   |
|  |  |   |                            |
| Attachment(s) 1. ☑ Notice of References Cited (PTO-892)  | 5. Notice of Info  | rmal Patent Application (P1                                 | O-152)                     |
| 2.  Notice of Draftperson's Patent Drawing Review (PTO-948)  |  |   |                            |
| 3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/  |  | lail Date<br>mendment/Comment                               |                            |
| Paper No./Mail Date<br>4. ☐ Examiner's Comment Regarding Requirement for Deposit   | 8. ⊠ Examiner's S  | tatement of Reasons for All                                 | lowance                    |
| of Biological Material   | 9. 🗌 Other   | 44  | <i>Z</i>                   |
|  |  | DAVID LAM<br>PRIMARY EXAM                                   |                            |

U.S. Patent and Trademark Office PTOL-37 (Rev. 1-04)

## **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37
 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Stanton on June 23, 2004.

## **IN THE ABSTRACT**:

- On page 18, lines 13-16, "Therefore, the present invention can prevent an insulating break phenomenon of the ONO insulating film that may happen during an erasing operation such as cycling, etc." has been deleted from the abstract of the invention. *See attachment*.

## Allowable Subject Matter

2. The following is an examiner's statement of reasons for allowance: Claims 1-11 are allowable over the prior art of record because none of the prior art whether taken singularly or in combination, especially when these limitations are considered within the specific combination claimed, to teach: a row decoder in a flash memory comprising: a switching means, among others as claimed in independent claim 1, having a gate electrode for receiving a third input signal as an input and connected between a second node and a second power supply terminal.

An erasing method comprising step of applied a negative erasing voltage to the word line to which the cell where the fail bit did not occur is connected, among others as claimed in independent claim 5.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

## Conclusion

- 3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
- Micheloni et al. (6,356,481) disclose a row decoder for a nonvolatile memory with capability of selectively biasing word lines to positive or negative voltage.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Lam whose telephone number is 571-272-1782. The examiner can normally be reached on 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1787. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9306.

Art Unit: 2818

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

D. Lam

June 23, 2004

DAVID LAM